

WHAT IS CLAIMED IS:

1. An apparatus for controlling a scanner, wherein the scanner includes a plurality of motors and sensors, the apparatus comprising:
  - a set of multiplexes connected to the sensors for receiving a sensor data from the sensors;
  - a set of shift registers connected respectively to output of each corresponding multiplexes;
  - a set of motors connected respectively to the set of the shift registers, wherein the set of shift registers received a motor control data, and the motor control data is feedback from the shift registers to the multiplexes; and
  - a set of latch registers connected respectively to the set of shift registers for latching the output data from the shift registers;
2. The apparatus of claim 1, wherein the shift register is a flip-flop device.
3. The apparatus of claim 1, wherein the latch register further outputs the latched data to the respective motor.
4. A method of controlling a scanner, the scanner having a set of motors and having a set of sensors, the method comprising:
  - receiving a motor control data from a plurality of registers;
  - driving the corresponding motor according to the motor control data;
  - receiving a sensor data from the registers by a set of shift registers, wherein the motor control data is feedback to a set of multiplexes;
  - selecting one of data from the sensor data or the motor control data in the multiplexes;
  - transmitting the selected data to the corresponding shift registers, wherein the

selected data is transmitted to the latch registers;

latching the selected data in the latch registers;

transmitting the latched data to the corresponding sensors to control the corresponding motors.

5        5. The method of claim 4, wherein the corresponding motors is controlled when a data-detecting signal is produced, the motor control data are transmitted to the multiplexes.

6. The method of claim 5, wherein the data-detecting signal is produced when the sensor data are transmitted to registers.

TOP SECRET//SI//REL TO USA, FVEY